

**SOLUTIONS**

Complete each of the questions on loose leaf.

**1) Multiply**

- a)  $(-4)(-11)$       b)  $14(-5)$       c)  $(-8)(4)$       d)  $3(25)$       e)  $6(-20)$       f)  $(-13)((-3))$

44	-70	-32	75	-120	39
----	-----	-----	----	------	----

- g)  $-9(11)$       h)  $(-12)(5)$       i)  $-8(17)$       j)  $3(-7)$       k)  $9(-12)$       L)  $-5(-14)$

-99	-60	-136	-21	-108	70
-----	-----	------	-----	------	----

**2) Find the Product**

- a)  $(-4)(-2)(-3)$       b)  $(6)(2)(-2)$       c)  $(-3)(9)(2)$       d)  $(-4)(5)(-3)$

-24	-24	-54	60
-----	-----	-----	----

- e)  $(-14)(12)(0)$       f)  $(-8)(-5)(-2)$       g)  $(6)(3)(2)$       h)  $(11)(-3)(10)$

0	-80	36	-330
---	-----	----	------

**3) Write a multiplication sentence and find the resulting temperature.**

- a) The temperature was  $0^{\circ}\text{C}$  per hour for 3 hours. What was the temperature after 3 hours?  
 b) The temperature was  $0^{\circ}\text{C}$  at midnight and it decreased  $2^{\circ}\text{C}$  per hour until 8 am. What was the temperature then?

$(0)(3) = 0$	$(-2)(8) = -16$
--------------	-----------------

- 4) A submarine descends (goes down) 80 m/minute for 10 minutes. Write a multiplication sentence and find the depth of the submarine.

- a) After 3 minutes      b) after 9 minutes

$(-80)(3) = -240$	$(-80)(9) = -720$
-------------------	-------------------

5) Air temperature decreases about  $6^{\circ}\text{C}$  for every 1 km increase in altitude.

- a) What is the temperature change from sea level to the top of the stratosphere, an altitude of about 27 km?
- b) The temperature at sea level was  $22^{\circ}\text{C}$ . What was the temperature at the top of the stratosphere?
- c) At the base of Mt. Everest, the temperature was  $-2^{\circ}\text{C}$ . What was the temperature 8000 m up the mountain?

$(-6)(27) = -162$	$22 + (-162) = -140$	$8000 \text{ m} = 8 \text{ km}$ $(-6)(8) = -48$ $-48 + (-2) = -50$
-------------------	----------------------	--

- 6) The altitude of a jet is 10 500 m. If the jet descends at a rate of 320 m/min, what would its altitude be after 20 minutes?

$(-320)(20) = -6400$ $10\,500\text{m} - 6400\text{m} = 4100 \text{ m}$
---